

Docket No. F-8484

U.S. National Stage of PCT/JP2003/007480

Filed June 12, 2003

AMENDMENTS TO THE CLAIMS:

Please replace the claims with the claims provided in the listing below wherein status, amendments, additions and cancellations are indicated.

1. (Original) A coke oven door to promote temperature rise in the vicinity thereof which comprises a heat-insulating box provided on the inner side of an oven door structure adapted to open and close a door jamb in the coke oven charged with coal particles via a seal plate pressed against said door jamb, horizontal support frames provided to partition the height of said heat-insulating box into multiple sections, and a bottom-less gas migration and isolation chamber formed by arranging shield bars to prevent the entry of coal particles, laterally and vertically with small ventilating spaces left on both sides thereof, to fill the spaces between said horizontal support frames, with the upper end thereof pivotally fastened to said horizontal support frames.

2. (Original) A coke oven door to promote temperature rise in the vicinity thereof according to claim 1, in which adjoining ends of at least the shield bars to prevent the entry of coal particles arranged on the coke oven side of the bottom-less gas migration and isolation hollow plug are joined by stepped joints, with small ventilating spaces left therebetween.

3. (Currently amended) A coke oven door to promote temperature rise in the vicinity thereof according to claim 1 [[or 2]], in which the lower end of said upper bar and the upper end of said lower bar are movably joined together by forming notched cross-sections, with a notched mating groove directed toward said gas migration and isolation hollow plug provided on one of the mating ends and a loosely fitting projection on the other.

4. (Original) A coke oven door to promote temperature rise in the vicinity thereof which comprises a heat-insulating box provided on the inner side of an oven door structure adapted to open and close a door jamb in the coke oven charged with coal particles via a seal plate pressed against said door jamb, upper shield bars fitted in spaces in said heat-insulating box partitioned by horizontal support frames having a slot extending in the direction of oven height and provided in the mating surface of the lower end thereof, lower shield bars having a downward-extending projection adapted to pass through and engaging with said slot and a projecting stopper adapted to come in contact with the lower end of said horizontal support frame provided in the lower end thereof.

5. (Original) A coke oven door to promote temperature rise in the vicinity thereof which comprises a heat-insulating box provided on the inner side

of an oven door structure adapted to open and close a door jamb in the coke oven charged with coal particles via a seal plate pressed against said door jamb, horizontal support frames having a rugged engaging portion at the upper edge and provided to partition the height of said heat-insulating box into multiple sections, and a bottom-less gas migration and isolation hollow plug formed by putting together, both vertically and laterally, shield bars having two separated hooks adapted to engage with the dents on both sides of a projection on said horizontal support frame by stepped joints, with small ventilating spaces provided on both sides thereof and vertical sliding spaces on the projecting side of both stepped joints, and a projecting stopper to prevent the breakoff of the shield bar by coming into contact with said horizontal support frame provided in the lower part of the shield bar.

6. (Currently amended) A coke oven door to promote temperature rise in the vicinity thereof according to ~~claims 1 to 5~~ claim 1, in which a cast-iron box containing a heat-insulating material is provided between the oven door structure and the bottom-less gas migration and isolation hollow plug.

7. (Currently amended) A coke oven door to promote temperature rise in the vicinity thereof according to ~~claims 1 to 6~~ claim 1, in which one or more

vertical nozzle pipes are separately provided in the bottom-less gas migration and isolation hollow plug, each of said vertical nozzle pipes comprising a gas nozzle in the upper part, a coal dust chute in the lower part, a combustion gas supply pipe communicating with a combustion gas supply source provided therebetween,.

8. (Currently amended) A coke oven door to promote temperature rise in the vicinity thereof according to ~~claims 1 to 6~~ claim 1, in which one or more combustion gas injection nozzles are separately provided in the bottom-less gas migration and isolation hollow plug, each of said combustion gas injection nozzles comprising a combustion gas nozzle pipe having in the gas flow passage thereof a nozzle directed toward the bottom-less gas migration and isolation hollow plug at one end thereof and a downward opening shutter adapted to close a gas passage in the combustion gas supply pipe connected to a combustion gas supply source at the other, a cylinder fastened to the uppermost point of said combustion gas nozzle pipe, said downward opening shutter movably connected via a movable connecting rod to a rod connected to the coke oven side of a piston reciprocating in said cylinder, and a gas flow pipe connecting the combustion gas pipe nozzle between said nozzle and downward opening shutter and the oven door side of said cylinder.

9. (Currently amended) A coke oven door to promote temperature rise in the vicinity thereof according to ~~claims 1 to 6~~ claim 1, in which one or more

combustion gas nozzle pipes are separately provided in the bottom-less gas migration and isolation hollow plug, each of said combustion gas injection nozzles comprising a combustion gas nozzle pipe having in the gas flow passage thereof a nozzle directed toward the bottom-less gas migration and isolation hollow plug at one end thereof and a downward opening shutter adapted to close a gas passage in the combustion gas supply pipe connected to a combustion gas supply source at the other, an ovally shaped annular member whose upper end tilts toward a combustion gas supply source and lower end toward the nozzle, and a downward opening shutter closing an opening in said annular member from the side of the nozzle.

10. (Currently amended) A coke oven door to promote temperature rise in the vicinity thereof according to ~~claims 8 and 9~~ claim 8, in which a tar reservoir communicating with the combustion gas passage at one end and having a closing lid at the other is provided below one or more combustion gas supply pipe or combustion gas nozzle pipe separated provided in the bottom-less gas migration and isolation hollow plug.